Minutes of the Bering Sea Aleutian Islands Groundfish Plan Team

September 2, 2011

The BSAI Groundfish Plan Team convened on Friday, September 2, at 9:00 am. Plan Team members present are listed under the Joint BSAI/GOA Groundfish Plan Team minutes. Fourteen members of the public and 9 agency personnel also attended.

Pollock: Jim Ianelli presented new information on the Bering Sea pollock assessment. In general, this year's survey information is not available for this meeting because of its early date this year. New data that is expected for the November assessment includes bottom trawl survey data, acoustic vessels-of-opportunity data (on the bottom trawl survey vessels) and 2010 fishery age compositions. Jim examined this season's fishery catch rate data because of reports that fishing was slow; he found that catch per day had dropped off in early August and then picked up by late August. He also found that catch per day also fell in other years later in the season.

Currently the Bogoslof pollock ABC is small (156 t). Jim presented some discussion of alternative bycatch levels that are allowable while still providing conditions conducive to rebuilding the Bogoslof stock. The motivation is that pollock bycatch has the potential to constrain flatfish fisheries in this area. The reference value set by the SSC currently is 2 mmt, but varied until 1996. Jim presented some alternative methods. Alternatives 1 and 2 set the maximum observed biomass (~2.4 mmt) as B0, and differed in how the Bmsy was set. Alternative 3 used a full age-structured assessment. Alternative 4 applied a Tier 5 approach based on the Bogoslof surveys. Alternatives 3 and 4 have been presented in previous assessments. The maximum survey value occurred in 1988 and substantial fishing occurred before this time and peaked during 1987-1989 which weakens the assumption that this value represents B0.

The Plan Team supports bringing forward these alternatives in the November assessment but does not have an alternative it favors at this point. Updating the age-structured model received the least support (Alternative 3) because the Plan Team suspects that an update would not provide a substantially different ABC estimate than previously (~25,000 t), yet it was recognized that having an update would fully complete the set of alternatives for the November Plan Team review. Further the decision regarding which catches to include in the age-structured model (e.g., Donut Hole) and stock separation would remain problematic and continue (as before) to add uncertainty to the accuracy of the biomass and ABC estimates. In addition, the Plan Team notes that they may choose to retain the current approach in November.

The Plan Team received copies of the spatial workshop but did not receive a presentation at the Plan Team meeting.

Aleutian Island Pacific cod: An age-structured stock assessment is done for the eastern Bering Sea (EBS), and the resulting ABC is then extrapolated to the entire BS/AI region on the basis of swept-area estimates of abundance from the EBS and AI trawl surveys. The proportion of the total for the AI in the final year is estimated by fitting a Kalman filter to the time series, but neither the OFL nor ABC is partitioned between regions. In recent years there has been some concern about this procedure because of disproportionate harvest in the AI and a declining trend in the AI trawl survey abundance estimate. The Team has recommended separate ABCs for the EBS and AI in the past.

In December 2010 the SSC requested that a standalone AI assessment be done for evaluation in 2011. In February 2011 the SSC expanded that charge, asking the assessment author and Team to develop a plan for how the BS/AI assessments should evolve. In response to the December request Grant Thompson produced a short paper that fitted a Kalman filter to the AI trawl survey abundance estimates directly, and then produced an AI ABC with a Tier 5 calculation.

In Grant's absence, Mike Sigler summarized Grant's paper on a Tier 5 approach for AI Pacific cod. The Team discussed the relative merits of the Kalman filter approach and Tier 5 approach for setting an ABC for the AI. The Kalman filter approach implicitly assumes that trawl survey catchability is the same in the EBS and AI, which is unlikely. The AI trawl net opens higher and probably has a higher catchability for cod, meaning that the present procedure probably overestimates AI biomass. The Tier 5 approach assumes that AI trawl survey catchability is 1, which is unlikely. It is almost certainly less, meaning that the Tier 5 approach probably underestimates AI biomass.

An industry representative suggested that the Team first consider the SSC's larger question as to how the BS and AI would be assessed and managed in the long term. He also observed that AI catches in 2011 have not been disproportionate even though the estimated proportion of biomass in the AI is lower than in the past. (Estimated biomass is 9%, catches are reportedly 6%). Because of that, it is not urgent to split the ABC for 2012.

Anne Hollowed reported that Grant had not had time to address the larger question because he was fully occupied with the EBS assessment. She reported that Teresa A'Mar likely would be taking over the GOA Pacific cod assessment in 2012 and she expected that Grant would be able to produce a plan for the AI assessment next year.

The Team looks forward to hearing Grant's recommendations next year. At this point, in view of the different abundance trends, our preference is for separate age-structured assessments of the EBS and AI. The Team expects that both the Kalman filter and Tier 5 approach be up for discussion in November.

Halibut rates in Yellowfin sole fishery: Tom Wilderbuer gave a brief presentation of the bycatch rates of halibut in the yellowfin sole fishery. This was placed on the agenda as a subject of interest. Tom was inspired to look into this subject by the recent Council attention to salmon and halibut bycatch. The information presented came from the groundfish observer database. A plot of the ratio of halibut to yellowfin sole CPUE in the survey and the fishery from 1991 to 2010 indicated a close correspondence between these measures. There was a notable decrease in the ratio for the fishery beginning in 2009. The data suggest that Amendment 80 was effective at reducing halibut bycatch. Jane DiCosimo commended Tom's initiative and noted that this exercise was timely considering the Council's interest in reducing halibut bycatch in the groundfish fisheries. Alan Haynie pointed out that care was needed when making comparisons from ratios because they do not indicate the sizes of the catches in any year.

Yellowfin sole Tom Wilderbuer presented the application of dendrochronology techniques to improve stock assessment estimates of growth in Bering Sea yellowfin sole. An otolith increment measurement study has shown that otolith growth and somatic growth in yellowfin sole are correlated with annual sea surface and bottom temperature. Length/weight data collected when obtaining otolith samples in NMFS RACE surveys (n=7,000) also indicated that weight at age was variable and seemed to relate to summer bottom water temperature observations with a lag of 2-3 years. The analysis indicates that yellowfin sole somatic growth is positively correlated with May bottom water temperature in the Bering Sea. These results for yellowfin sole were used to explore climate impacts on growth by incorporating temperature-dependent growth into an age-structured stock assessment model and then comparing the results with the base model that uses time-invariant growth. Bill Clark suggested using the estimated population as a covariate to model the annual growth increment due to density dependent effects.

BSAI Skates Olav Ormseth presented a discussion on splitting Alaska skates out of the BSAI skate complex. The species composition and abundance differs between the EBS and AI. There is low diversity on the EBS shelf as almost all are Alaska skates, which have a high biomass. Alaska skates are found mainly <200 m. The EBS slope has the highest skate diversity, which is driven by depth. The AI has medium diversity of skates and is not dominated by Alaska skates.

A number of management changes have resulted in more precautionary management for BSAI skates. In 1999 the BS survey started identifying skates to species. The Observer Program followed in 2005. The BSAI skate complex was broken out of the other species complexes beginning in 2011 and is managed as one complex. Since 2008, due to the development of an age-structured model for Alaska skates, BSAI Alaska skate is calculated under Tier 3 and all others are calculated under Tier 5. Then the specifications are summed. Tier 3 results in a lower, more conservative OFL than under Tier 5. The age-structured model results in 88% lower ABC and 76% lower OFL. Also two GOA skates species were separated from the skate complex, and all GOA skates were broken out of the GOA other species category, in 2006 after a target fishery occurred the previous year.

NMFS puts BSAI Alaska skates on bycatch status at the beginning of the fishing year and they are retained up to the maximum retainable amount (20% of the target species catch). Skate bycatch is substantial, particularly in the Pacific cod longline fishery. There is not a huge fluctuation in catch, and skates have not hit the OFL. There are nine times as many Alaska skates caught as all other skates combined.

There is now separate catch accounting for Alaska skates (as well as big and longnose skates, which have been accounted separately since 2005), so that would not be an issue if only Alaska skates were split out. However if each skates species were split out new species codes would be needed for the catch accounting system (CAS), which would require amending federal regulations. While observers are trained to identify skates, getting access to skates for purposes of identification can be problematic, especially in longline fisheries. In addition, shoreside species identification is likely to be inadequate. As a result, there may be some issues regarding CAS data at the skate species level. However, species-level catch accounting is valuable for tracking the catch relative to the biomass of individual species. Small TACs for individual species have the potential to constrain target fisheries.

Olav presented the following four management alternatives to consider. He stated his ambivalence about the need to revise skate management. He weakly recommended #3. He pointed out that even if no species of skate are split out, skates are not in danger of overfishing. In 2010 18 mt of Alaska skate were caught; the ABC was 24 mt. Similarly, the catch of Other Skates is well below its ABC. This is not a question of conservation, but of best management practices.

(1) Status quo, i.e., do not make any changes.
(2) Split into Alaska skates and other skates; leave other skates lumped for catch accounting.
(3) Split into Alaska skates and other skates; have species-level catch accounting.
(4) Split out each skate species with species-level management.

A lengthy discussion ensued among Plan Team members and industry and agency staff. Industry representatives affirmed they would support splitting out skates to species if there was a conservation concern. Instead this action has the potential to constrain target fisheries. Given the right market conditions skates could quickly expand from bycatch to a target fishery if allowed. As species are separated out, more buffer must be put into each TAC so as not to exceed the 2 M mt OY cap. Non-target species are allocated lower TACs of the total OY, and are sometimes underfunded and TAC overages may occur. For catch accounting in the smaller shoreside landings, catch of Alaska skates likely are overestimated, either because the identification is not really known or because there is a market for Alaska skates and not for the other species. The result is that skates will be discarded, which is contrary to conservation concerns.

The Team concurred that there is not a strong rationale due to a conservation concern for splitting out Alaska skates at this time and that there are many unanswered questions about the consequences. The ability to identify a species is not sufficient reason to manage the species separately. The Team noted that two GOA skate species were broken out because a fishery was expected to develop on them.

The issue of species-level management is complicated by spatial management. Skate species in the BSAI have different distributions, driven in part by depth. Skates in the BSAI have been recommended for review using the Council's new spatial management template. Should a spatial management split (e.g., AI vs EBS) be necessary, layering it on a species split could create a management problem in the future.

There was an argument in favor of consistency in the decisions by the Plan Team. However attempting to maintain consistency does not mean Alaska skates must be split because the Plan Team split out other species. This points to the need for a Plan Team policy; should we only split out species when it is a conservation issue? Mary Furness offered to provide a list of the history of splitting out species for our next meeting, i.e., what species and why they were separated from a complex.

In summary the Team acknowledged the trade-off between balancing national standards to achieve OY and not to overfish individual species, along with additional burdens on catch accounting, the regulatory process, and the needs of the industry. The Team requested additional information on the consequences of splitting species from complexes. The BSAI Plan Team encouraged the author to:

(1) Examine alternative 3 – split into AK skate and other skates (which has been done via separate tier management),
(2) Calculate a split into BS and AI (corresponding to previous team discussions on spatial management),
(3) Examine the effect of layering species splits with spatial splits (but only do this if this is not a large amount of work).

In addition, the Team supported the development of species-level catch accounting for skates so that catch/biomass can be monitored for individual species. This would enhance skate conservation without adding additional burden on industry.

Proposed Specifications: The Team adopted the current OFLs and ABCs for BSAI groundfish as the Team's recommendations for proposed specifications for both 2012 and 2013, as no new information was received. Team recommendations are attached to these minutes. Final harvest specifications will be based on the stock assessments in the SAFE Report. *The Team noted its previous recommendation that stock assessments were optional for Tier 5 and Tier 6 stocks this year, as it is an "off" year for the AI survey. Typically assessments are not prepared for rockfishes and flatfishes in off years, and the Team expanded that to include sharks, skates, sculpins, and squid. Because of the new approach for estimating M for octopus, the Team anticipates a BSAI chapter for octopus in November*.

Adjournment: The Team adjourned at approximately 3:30 pm.

September 2011 BSAI Plan Team Recommendations for Proposed OFL and ABC (metric tons) for 2012-2013

		2010 final				2011 final			8/20//2011	2012 final			2012 proposed			2013 proposed		
Species	**Area**	**OFL**	**ABC**	**TAC**	**Catch**	**OFL**	**ABC**	**TAC**	**Catch**	**OFL**	**ABC**	**TAC**	**OFL**	**ABC**	**TAC**	**OFL**	**ABC**	**TAC**
Pollock	EBS	918,000	813,000	813,000	810,195	2,450,000	1,270,000	1252000	936151	3,170,000	1,600,000	1,253,658	3,170,000	1,600,000		3,170,000	1,600,000	
	AI	40,000	33,100	19,000	1,285	44,500	36,700	19000	1,019	50,400	41,600	19,000	50,400	41,600		50,400	41,600	
	Bogoslof	22,000	156	50	176	22,000	156	150	140	22,000	156	150	22,000	156		22,000	156	
	Total	980,000	846,256	832,050	811,656	2,516,500	1,306,856	1271150	937310	3,242,400	1,641,756	1,272,808	3,242,400	1,641,756		3,242,400	1,641,756	
Pacific cod	BSAI	205,000	174,000	168,780	168,429	272,000	235,000	227950	153563	329,000	281,000	229,608	329,000	281,000		329,000	281,000	
Sablefish	BS	3,310	2,790	2,790	755	3,360	2,850	2850	434	3,080	2,610	2,610	3,080	2,610		3,080	2,610	
	AI	2,450	2,070	2,070	1,077	2,250	1,900	1900	566	2,060	1,740	1,740	2,060	1,740		2,060	1,740	
	Total	5,760	4,860	4,860	1,832	5,610	4,750	4750	1000	5,140	4,350	4,350	5,140	4,350		5,140	4,350	
Atka mackerel	EAI/BS	n/a	23,800	23,800	23,612	n/a	40,300	40300	23199	n/a	36,800	36,800	n/a	36,800		n/a	36,800	
	CAI	n/a	29,600	29,600	26,388	n/a	24,000	11280	7314	n/a	21,900	10,293	n/a	21,900		n/a	21,900	
	WAI	n/a	20,600	20,600	18,650	n/a	21,000	1500	205	n/a	19,200	1,500	n/a	19,200		n/a	19,200	
	Total	88,200	74,000	74,000	68,650	101,000	85,300	53080	30718	92,200	77,900	48,593	92,200	77,900		92,200	77,900	
Yellowfin sole	BSAI	234,000	219,000	219,000	118,642	262,000	239,000	196000	98656	266,000	242,000	197,660	266,000	242,000		266,000	242,000	
Rock sole	BSAI	243,000	240,000	90,000	53,221	248,000	224,000	85000	56891	243,000	219,000	85,000	243,000	219,000		243,000	219,000	
Greenland turbot	BS	n/a	4,220	4,220	2,271	n/a	4,590	3500	1974	n/a	4,300	3,500	n/a	4,300		n/a	4,300	
	AI	n/a	1,900	1,900	1,866	n/a	1,550	1550	464	n/a	1,450	1,450	n/a	1,450		n/a	1,450	
	Total	7,460	6,120	6,120	4,137	7,220	6,140	5050	2438	6,760	5,750	4,950	6,760	5,750		6,760	5,750	
Arrowtooth flounder	BSAI	191,000	156,000	75,000	39,416	186,000	153,000	25900	13471	191,000	157,000	25,900	191,000	157,000		191,000	157,000	
Kamchatka flounder	BSAI					23,600	17,700	17700	8060	23,600	17,700	17,700	23,600	17,700		23,600	17,700	
Flathead sole	BSAI	83,100	69,200	60,000	20,125	83,300	69,300	41548	9515	82,100	68,300	41,548	82,100	68,300		82,100	68,300	
Other flatfish	BSAI	23,000	17,300	17,300	2,203	19,500	14,500	3000	2799	19,500	14,500	3,000	19,500	14,500		19,500	14,500	
Alaska plaice	BSAI	278,000	224,000	50,000	16,166	79,100	65,100	16000	17293	83,800	69,100	16,000	83,800	69,100		83,800	69,100	
Pacific Ocean perch	BS	n/a	3,830	3,830	3,547	n/a	5,710	5,710	856	n/a	5,710	5,710	n/a	5,710		n/a	5,710	
	EAI	n/a	4,220	4,220	4,038	n/a	5,660	5,660	3,698	n/a	5,660	5,660	n/a	5,660		n/a	5,660	
	CAI	n/a	4,270	4,270	4,033	n/a	4,960	4,960	3,938	n/a	4,960	4,960	n/a	4,960		n/a	4,960	
	WAI	n/a	6,540	6,540	6,234	n/a	8,370	8,370	8,181	n/a	8,370	8,370	n/a	8,370		n/a	8,370	
	Total	22,400	18,860	18,860	17,852	36,300	24,700	24,700	16,673	34,300	24,700	24,700	34,300	24,700		34,300	24,700	
Northern rockfish	BSAI	8,640	7,240	7,240	4,332	10,600	8,670	4000	2164	10,400	8,330	4,000	10,400	8,330		10,400	8,330	
Shortraker rockfish	BSAI	516	387	387	322	524	393	393	236	524	393	393	524	393		524	393	
Rougheye rockfish	BSAI	669	547	547	255	549	454	454	131	563	465	465	563	465		563	465	
Other rockfish	BS	n/a	485	485	263	n/a	710	500	220	n/a	710	500	n/a	710		n/a	710	
	AI	n/a	555	555	498	n/a	570	500	402	n/a	570	500	n/a	570		n/a	570	
	Total	1,380	1,040	1,040	761	1,700	1,280	1000	622	1,700	1,280	1,000	1,700	1,280		1,700	1,280	
Squid	BSAI	2,620	1,970	1,970	410	2,620	1,970	425	222	2,620	1,970	425	2,620	1,970		2,620	1,970	
Other species	BSAI	88,200	61,100	50,000	23,370													
Skates	BSAI					37,800	31,500	16500	15883	37,200	31,000	16,500	37,200	31,000		37,200	31,000	
Sharks	BSAI					1,360	1,020	50	107	1,360	1,020	50	1,360	1,020		1,360	1,020	
Octopuses	BSAI					528	396	150	174	528	396	150	528	396		528	396	
Skulpins	BSAI					58,300	43,700	5200	4028	58,300	43,700	5,200	58,300	43,700		58,300	43,700	
Total	BSAI	2,462,945	2,121,880	1,677,154	1,351,775	3,954,111	2,534,729	2,000,000	1,371,954	4,731,995	2,911,610	2,000,000	4,731,995	2,911,610		4,731,995	2,911,610	

Notes: Final 2010 OFLs, ABCs, and TACs from final 2010-2011 final harvest specifications rule, 2010 catch from NMFS catch Accounting System through 12/31/2010.

Final 2011 and 2012 OFLs, ABCs, and TACs from final 2011-2012 final harvest specifications rule,

For the November PT meeting the Council's recommendations for the proposed 2012-2013 will be included and catch through November 12, 2011 will be included

The "other species" category was disolved beginning in 2011 into skates, sharks, octopuses, and sculpins

November 2011 Assignments for BSAI Groundfish SAFE Report

Team Member	Introduction	E. Bering Sea Pollock	Aleutian Island Pollock	Bogoslof Island Polloc	Pacific cod	Sablefish	Northern rock sole	Alaska plaice	Other flatfish complex	Greenland turbot	yellowfin sole	Flathead sole	AT Flounder	Kamchatka flounder	Pacific Ocean perch	Northern Rockfish	Shortraker rockfish	Blackspotted/Rougheye complex	Other Rockfish coomplex	Atka mackerel	Skate complex	Shark complex	Squid complex	Octopus complex	Sculpins complex	Grenadier complex	Ecosystem Summary	Economics Summary	Tables 2 and 3	Tables 1, 5, 6	Team Minutes	Lead	Backup	TOTAL
Thompson	1	**1**	1	1																1								1			1	1	4	5
Sigler	1	1	**1**	**1**	1															1						**1**					1	3	3	6
Fritz	1	1	1	1	1															**1**							1				1	1	5	6
Low		1	1	1	1																										0	0	4	4
Aydin	1	1	1	1	1										1				1		1	1	**1**	1	**1**		**1**				1	6	6	12
Hanselman	1				1										**1**	1	1	1	**1**												1	2	4	6
Slater					1	1																					1				0	0	3	3
Norcross	1						**1**	**1**	**1**	1	1	1	1	1																	1	3	5	8
Carlile	1					1	1	1	1	**1**	**1**	1	1	1																**1**	1	3	7	10
Barnard	1					**1**	1	1	1	1	1	**1**	1	1																	1	2	7	9
Cheng	1					1	1	1	1	1	1	1	**1**	**1**	1	1	1	1	1												1	1	13	14
Furuness	1														1	1	1	1	1		**1**	1	1	**1**	1				**1**		1	3	8	11
DiCosimo	**1**																				1	1	1	1	1	1		1		1	**1**	1	7	8
Clark	1				**1**	1																**1**				1					1	2	2	4
Haynie	1					1										**1**	**1**	**1**										**1**			1	4	1	5
TOTAL		5	5	5	7	6	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	3	3	3	3	3	3	1	2	13	32	79	124

Each team member should read all chapters

"1" in a cell indicates that person will be involved in writing or reviewing the species summary

"**1**" indicates that this person has primary responsibility for writing the summary for the 1) Introduction and 2) minutes